WHAT IS CLAIMED IS:

1. An array comprising nucleic acid molecules comprising a plurality of sequences, wherein the molecules are immobilized on a solid support and wherein at least 5% of the immobilized molecules are capable of hybridizing to mitochondrial-related nucleic acid sequences or complements thereof.

2. The array of claim 1, further defined as comprising at least 20 nucleic acid molecules.

3. The array of claim 1, further defined as comprising at least 40 nucleic acid molecules.

4. The array of claim 1, further defined as comprising at least 100 nucleic acid molecules.

5. The array of claim 1, further defined as comprising at least 200 nucleic acid molecules.

6. The array of claim 1, further defined as comprising at least 400 nucleic acid molecules.

7. The array of claim 1, wherein said nucleic acid molecules comprise cDNA sequences.

8. The array of claim 1, wherein each of said nucleic acid molecules comprises at least 17 nucleotides.

9. The array of claim 1, wherein the mitochondrial-related nucleic acid sequences are from a mammal.

10. The array of claim 9, wherein the mitochondrial-related nucleic acid sequences are from a primate.

11. The array of claim 9, wherein the mitochondrial-related nucleic acid sequences are from a human.

12. The array of claim 9, wherein the mitochondrial-related nucleic acid sequences are from a yeast.

13. The array of claim 9, wherein the mitochondrial-related nucleic acid sequences are from a mouse.

14. The array of claim 9, wherein the mitochondrial-related nucleic acid sequences are from Drosophila.

15. The array of claim 9, wherein the mitochondrial-related nucleic acid sequences are from the nematode, *C. elegans*.

16. The array of claim 1, wherein at least 25% of the immobilized molecules are capable of hybridizing to mitochondrial-related nucleic acid sequences or complements thereof.

17. The array of claim 1, wherein at least 35% of the immobilized molecules are capable of hybridizing to mitochondrial-related nucleic acid sequences or complements thereof.

18. The array of claim 1, wherein at least 50% of the immobilized molecules are capable of hybridizing to mitochondrial-related nucleic acid sequences or complements thereof.

19. The array of claim 1, wherein at least 75% of the immobilized molecules are capable of hybridizing to mitochondrial-related nucleic acid sequences or complements thereof.

20. The array of claim 1, wherein at least 85% of the immobilized molecules are capable of hybridizing to mitochondrial-related nucleic acid sequences or complements thereof.

21. The array of claim 1, wherein at least 95% of the immobilized molecules are capable of hybridizing to mitochondrial-related nucleic acid sequences or complements thereof.

22. The array of claim 1, wherein 100% of the immobilized molecules are capable of hybridizing to mitochondrial-related nucleic acid sequences or complements thereof.

23. The array of claim 1, wherein at least one of said mitochondrial-related nucleic acid sequences is encoded by a mitochondrial genome.

24. The array of claim 1, wherein the immobilized molecules are capable of hybridizing to at least 5 mitochondrial-related nucleic acid sequences or complements thereof.

25. The array of claim 1, wherein the immobilized molecules are capable of hybridizing to at least 10 mitochondrial-related nucleic acid sequences or complements thereof.

26. The array of claim 1, wherein the immobilized molecules are capable of hybridizing to at least 13 mitochondrial-related nucleic acid sequences or complements thereof.

27. The array of claim 1, wherein the immobilized molecules are capable of hybridizing to at least 20 mitochondrial-related nucleic acid sequences or complements thereof.

28. The array of claim 1, wherein the immobilized molecules are capable of hybridizing to at least 30 mitochondrial-related nucleic acid sequences or complements thereof.

29. The array of claim 1, wherein the immobilized molecules are capable of hybridizing to at least 60 mitochondrial-related nucleic acid sequences or complements thereof.

30. The array of claim 1, wherein the immobilized molecules are capable of hybridizing to at least 100 mitochondrial-related nucleic acid sequences or complements thereof.

31. The array of claim 1, wherein the immobilized molecules are capable of hybridizing to at least 200 mitochondrial-related nucleic acid sequences or complements thereof.

32. The array of claim 1, wherein the immobilized molecules are capable of hybridizing to at least 300, at least 500, or at least 1000 mitochondrial-related nucleic acid sequences or complements thereof.

33. The array of claim 1, wherein at least one of said mitochondrial-related nucleic acid sequences is encoded by a nuclear genome.

34. The array of claim 1, wherein at least one of said mitochondrial-related nucleic acid sequences is encoded by a mitochondrial genome.

35. A method for measuring the expression of one or more mitochondrial-related coding sequence in a cell or tissue, said method comprising:

a) contacting an array according to claim 1 with a sample of nucleic acids from the cell or tissue under conditions effective for mRNA or complements thereof from said cell or tissue to hybridize with the nucleic acid molecules immobilized on the solid support; and

b) detecting the amount of mRNA or complements thereof hybridizing to mitochondrial-related nucleic acid sequences or complements thereof.

36. The method of claim 35, wherein said detecting is carried out colorimetrically, fluorometrically, or radiometrically.

37. The method of claim 35, wherein the cell is a mammal cell.

38. The method of claim 35, wherein the cell is a primate cell.

39. The method of claim 35, wherein the cell is a human cell.

40. The method of claim 35, wherein the cell is a mouse cell.

41. The method of claim 35, wherein the cell is a yeast cell.

42. A method of screening an individual for a disease state associated with altered expression of one or more mitochondrial-related nucleic acid sequences comprising:

a) contacting an array according to claim 1 with a sample of nucleic acids from the individual under conditions effective for the mRNA or complements thereof from said individual to hybridize with the nucleic acid molecules immobilized on the solid support;

b) detecting the amount of mRNA or complements thereof hybridizing to mitochondrial-related nucleic acid sequences; and

c) screening the individual for a disease state by comparing the expression of said mitochondrial-related nucleic acid sequences detected with a pattern of expression of said mitochondrial-related nucleic acid sequences associated with said disease state.

43. The method of claim 42, wherein said disease state is a disease state as listed in Table 1.

44. The method of claim 43, wherein the disease state is cystic fibrosis, Alzheimer's disease, Parkinson's disease, ataxia, diabetes mellitus, multiple sclerosis or cancer.

45. The method of claim 42, wherein said detecting is carried out colorimetrically, fluorometrically, or radiometrically.

46. The method of claim 42, wherein the individual is a mammal.

47. The method of claim 42, wherein the individual is a primate.

48. The method of claim 42, wherein the individual is a human.

49. The method of claim 42, wherein the individual is a mouse.

50. The method of claim 42, wherein the individual is a an arthropod.

51. The method of claim 42, wherein the individual is a nematode.

52. A method of screening a compound for its affect on mitochondrial structure and/or function comprising:

a) contacting an array according to claim 1 with a sample of nucleic acids from a cell under conditions effective for the mRNA or complements thereof from said cell to hybridize with the nucleic acid molecules immobilized on the solid support, wherein the cell has previously been contacted with said compound under conditions effective to permit the compound to have an affect on mitochondrial structure and/or function;

b) detecting the amount of mRNA encoded by mitochondrial-related nucleic acid sequences or complements thereof that hybridizes with the nucleic acid molecules immobilized on the solid support; and

c) correlating the detected amount of mRNA encoded by mitochondrial-related nucleic acid molecules or complements thereof with the affect of the compound mitochondrial structure and/or function.

53. The method of claim 52, wherein the compound is a small molecule.

54. The method of claim 52, wherein the compound is formulated in a pharmaceutically acceptable carrier or diluent.

55. The method of claim 52, wherein the compound is an oxidative stressing agent or an inflammatory agent.

56. The method of claim 52, wherein the compound is a chemotherapeutic agent.

57. The method of claim 52, wherein said detecting is carried out colorimetrically, fluorometrically, or radiometrically.

58. A method for screening an individual for reduced mitochondrial function comprising:

a) contacting an array according to claim 1 with a sample of nucleic acids from a cell under conditions effective for the mRNA or complements thereof from said cell to hybridize with the nucleic acid molecules immobilized on the solid support;

b) detecting the amount of mRNA encoded by mitochondrial-related nucleic acid sequences or complements thereof that hybridizes with the nucleic acid molecules immobilized on the solid support; and

c) correlating the detected amount of mRNA or complements thereof with reduced mitochondrial function.

59. The method of claim 58, wherein said detecting is carried out colorimetrically, fluorometrically, or radiometrically.

60. The method of claim 58, wherein the individual is a mammal.

61. The method of claim 58, wherein the individual is a primate.

62. The method of claim 58, wherein the individual is a human.

63. The method of claim 58, wherein the individual is a mouse.

64. The method of claim 58, wherein the individual is an arthropod.

65. The method of claim 58, wherein the individual is a nematode.